

**DEER TRAIL MINING COMPANY, LLC
RECLAMATION COST ESTIMATE
FOR FINE ORE BIN
AND GALLERY**

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APR 27 2005

The general layout for the mill area is illustrated in Fig. ML-1

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DESCRIPTION OF FINE ORE BIN CONSTRUCTION

The general layout of the Fine Ore Bin (F.O.B) is illustrated in Fig. ML-3. The footings and lower walls are of reinforced concrete construction. The 2 ft- thick walls have outside dimensions of 24.5 feet long by 12 ft wide, and rise 14 feet up from the ground level, or 15 feet up from the top of the foundation. Concrete reinforcement consists of ½" rebar both horizontally and vertically at one-foot intervals on each side of the wall, but 4" inside the concrete. The concrete walls support two cylindrical fine ore bins, each measuring 11 ft diameter and 17.5 feet high. The walls of the ore bins are 3/8" thick mild steel, reinforced on the exterior walls with 2 x 6 channel rings spaced at distances of approximately six-ft centers. Each silo is secured to sleepers by 4 spot-welds, each measuring 4 inches long (one on each of 4 sides of the tank). Each of the eight sleepers measure 8 ft long, 2 feet wide, and 1/2" thick, and rest directly on the top of the concrete walls. Also connected to the sleepers are two inverse-pyramidal discharge hoppers, each measuring approximately 8 ft x 8 ft on the top, where they connect with the sleepers. The fine ore passes through these and ~~Each of the ore bins~~ will discharge their contents onto separate conveyor belts, which meld together prior to discharging into the ball mill. The fine ore bins are topped with an 8-ft high upper deck, where the fine ore from the fine ore pad is discharged from the long incline conveyor ~~(and shuttle conveyor)~~ into each bin. The upper deck is covered by a sloping roof. The fine ore bin will be enclosed within an insulated shell of steel siding. The upper deck will be of 2" x 4" construction with studs at 16" centers. The floor joists of the upper deck will be of 2" x 6" construction at 12" centers, capped with 2 layers of ½" chip board. The reclamation cost estimate is addressed in Table 1. As the Fine Ore Bin is located on previously disturbed ground, re-seeding and soil re-covering has been addressed under Permit File # M10311003

MOBILE AND SEMI-MOBILE EQUIPMENT REQUIREMENTS

Note: The main pieces of mobile equipment for the demolition of the fine ore bin and upstairs floor of the annex include:

- a) A high-lift fork-lift (c/w basket), required for the removal of sheet metal siding and purlins
- b) An excavator (preferably a Cat 317 B L or equivalent), for pulling down structures (with long cables), excavating burying pits, separating steel, wood and concrete, and loading the Lo-Boy truck used for hauling the steel to Marysvale steel dump.
- c) A Lo-boy semi-trailer truck, used for mobilization of the excavator and high-lift fork lift, for haulage of steel to Marysvale steel dump.

The mobile equipment required for the demolition of the fine ore bin and annex is the same as the equipment required for the demolition of the mill. Since the demolition and disposal of the fine ore bins and upper floor of the annex run concurrently with the demolition of the mill itself, mobilization and demob of the equipment should have already been accounted for in the original bonding. It is therefore not included in the dismantling of the upper annex or fine ore bin.

OTHER EQUIPMENT REQUIRMENTS.

It is not known whether it would be advantageous to rent a compressor and drill & blast any portion of the mill building. In any case, the mob/demob for the compressor has been included in this section.. The compressor required must be 250 cfm to handle the drilling required. The drill(s) required would consist either of a jackleg drill and/or a jackhammer drill, both of which use 7/8" steel. If both units are used, the upper half of the 2-ft thick concrete wall would be drilled by vertical downholes with the jackhammer drill while the lower half of the wall is drilled by horizontal holes with a jackleg. Finally, a chainsaw is required to reduce wood into manageable-sized pieces.

DEMOLITION AND DISPOSAL OF THE FINE ORE BINS AND GALLERY

Roofs of Fine Ore Bin and gallery:

The roofs of the fine ore bin could be removed by pulling them off after the siding is removed. Under that scenario, a hole is bunged through the siding on the roof on each side of the ridge-pole. A 100-foot long, 1/2" fiber-core steel cable (nominal strength 10.5 tons) is then wound around the ridgepole, secured with a hook or Clevis, and the entire roof is pulled down in one piece using the excavator. Once on the ground, the steel roofing (siding) is separated from the wood. The wood is stacked and burned, and the steel siding is buried because it is too deformed to be re-used.. The roof of the conveyor gallery between the mill and fine ore bin can easily be removed by hand, thereby allowing the sheeting to be sold to local farmers or hauled to the Marysvale steel scrap yard.

Walls of fine ore bin and gallery

The high-lift fork lift is used allow the contractor to carefully unscrew, remove and stack the steel siding. As the value of all the steel siding on the site far exceeds \$20,000, there would be no difficulty in having a contractor come in, at his own expense (including bringing his own fork-lift (at no expense to the company), for the recoverable value of the steel siding. However, only worst-case conditions are considered here and therefore, it is assumed that the steel siding is loaded onto the Lo-boy and hauled to the Marysvale steel dump. The insulation is brought down and offered to local people at no cost, as long as they come and load it themselves. Otherwise it is buried in one of the pits.

Upper Deck floor of the fine ore bin:

This is composed of wood. Holes are drilled in the OSB and cables attached, a chain saw is used to cut the OSB between each floor joist. Finally, the cut sections are pulled down and burned, with the residue pushed into the excavated pit.

Fine Ore Bin Tanks (Silos):

Holes are drilled near the top of each of the tanks and the long cable is attached. The spot-welds at the base of the tanks, where they contact the sleepers, are cut with a torch. The excavator then pulls each tank down. This assumes worst-case conditions where no sales of the tanks can be arranged. A scrap steel buyer in Sigurd buys all type of scrap steel, no size is too large or heavy. As a worst of the worst-case condition, which is included in Table 1, the tanks are hauled by the Lo-boy truck to the Marysvale steel dump.

Discharge hoppers and sleepers:

The welds connecting the bottom (discharge) hoppers to the sleepers are cut with a welding torch and fall down to the floor between the two side-walls. The sleepers are separated with a welding torch, thrown over the side and either sold as scrap or hauled to the Marysvale steel dump. The absence of the sleepers exposes the top of the wall.

Discharge hoppers:

The discharge hoppers, each which weigh approximately 1.3 tons, are lifted out from between the side walls of the fine ore bin with the excavator, loaded on the Lo-boy and are hauled to the Marysvale steel dump, along with the sleepers.

Drilling and blasting of the fine ore bin walls.

Two alternatives are available here. In the first case, one-ft holes are drilled horizontally at two-ft centers using a 2-ft drill-steel and jackleg. In the second case, vertical holes are drilled at 2-ft spacing to depths of 15 feet using either extension steel or else eight drill-steels varying in length from 2 ft to 16 ft. The drilling in the second case would be done with a jack hammer. Drill-water is immediately available in either case. Drilling vertical holes has greater merit from a drilling cost point of view but the main deciding factor is the availability of the required drill steel. These are blasted either with ANFO or stick powder. In either case, all holes are connected with primacord and are all blasted concurrently. A miner with a blasting certificate will load the holes and blast them. Although loading and blasting should take no more than four hours, eight hours are budgeted for this.

Fine Ore Bin Concrete Floor:

The floor between the side walls of the fine ore bin is in an area measuring 22.5 ft x 7.83 ft and is 4" thick. Since the concrete is not bonded to cement, it can be easily broken up by the excavator, lifted out and buried.

Burying Waste:

Exposed rebar can be cut either with oxy-acetylene or with a hand-operated rotary steel cutter. Individual pieces are broken fine enough to be separated and are dragged into the adjacent pit by the excavator.

DESCRIPTION OF THE CONVEYOR GALLERY

The conveyor gallery is installed to act as a cover for the ball-mill feed conveyors, and retain heat in the fine ore bin section. It is situated in the ~~13.0~~ 10.5-ft space between the fine ore bin structure and the mill building. It is of insulated 2" x 4" construction. The cladding (steel siding) and roof will be of standard, painted steel siding. The conveyor gallery will be situated on a pad previously occupied by a small fine ore bin, on previously-disturbed ground. Therefore, re-seeding and soil re-covering has therefore been addressed under Permit File # M10311003

Demolition of the conveyor gallery:

Roof: Since the outside walls of the conveyor gallery are only about 8 ft high, the roofing (steel siding) of the conveyor gallery is removed by hand, as are the roof rafters. The wood is stacked and burned, the steel siding of the roof is either hauled to the dump, sold or donated, depending upon its condition. The steel siding of the side-walls is unscrewed and carefully removed and stacked for donation or sale or is dumped in the excavation and buried. The exposed 2 by 4's are separated and donated, sold or burned.

Floor:

The concrete floor includes a 10.5 ft x 10 ft section and averages about 6" thick. It is torn up by the excavator, broken and buried.

DESCRIPTION OF THE UPPER FLOOR OF THE MILL ANNEX

The general layout of the upper floor of the Annex is illustrated on Figs. ML-4, ML-5, and ML-6. The lower level of the mill annex was constructed several years ago, connecting to the east side of the mill. The annex itself measures 20 x 40 feet and has been included in the Large-Scale Permit. The upper floor, which is now under construction, also measures 20 ft x 40 ft, with the east wall being 8 ft high, sloping down from the mill proper from a height of 10 ft. Using outside dimensions, the upper floor constitutes slightly less than 8,000 ~~square~~ cubic feet. The roof cladding consists of OSB, covered with asphalt roofing material. The walls are insulated with R-19 insulation and the outside of the walls is presently covered with OSB. In future, steel cladding will be installed over the OSB. Within the addition will be a lavatory/change-room, a lunchroom, a control room / mill office, and a guest bathroom (see Figs. accompanying plans). The number of employees using the facilities will normally range from 3 to 6 per shift.

≡ We already have a plan for the sewage system, set out by a government agent, and this will be followed. I would expect that any disturbance of the underground portion of the sewage system would only cause more environmental and health hazards than leaving the

septic tank and drainage field intact. Regarding the proposed plumbing and sewage system, ~~A~~ a copy of the as-yet un-submitted application is enclosed for your perusal. We have made marginal changes from those on the application. As these alterations were more conservative than the requirements, our Consultant has verbally approved of the changes. The sewage system will now include a 1,500 gallon polyethylene septic tank, buried with the top at 4 ft beneath the surface, plus a drainage field. The seepage trench will be 45 feet long, 3 feet wide and 9.25 to 9.5 feet deep, as shown in Fig. ML-2.

DEMOLITION OF THE UPPER FLOOR OF THE MILL ANNEX

Removal and disposal of the windows and doors:

These will be removed and will be sold, donated, or burned and buried.

Plumbing & Sewage: All above-ground plumbing (toilets, showers, sinks, piping) will be removed and either sold, donated or buried.

Roof and walls:

The steel siding on the walls (and possibly the roof) will be unscrewed and carefully stacked for re-sale or donation. The roof and walls will then be pulled down by the excavator, using the ½" long cable. The material will be broken up by the excavator, piled and burned, with the residue buried in an excavated pit.

Sewage System:

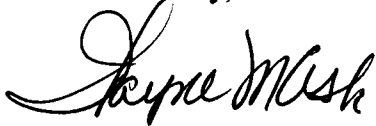
~~We have not yet commenced with construction of the sewage system. Application for the required has not yet been applied for. The reason is that along with the permit comes a proviso that the construction must be done within a specified time. Thus, we have decided to wait until permission for this addendum is received regarding its possible reclamation prior to applying for the construction permit. The sewage system is located on previously disturbed ground covered by Permit File # M10311003. Therefore, soil cover and re-seeding have already been addressed~~

~~Since the sewage system is buried, we do not know whether or not it requires reclamation and if so, what the requirement is.~~

COST CONSIDERATIONS

The enclosed two tables assume that all reclamation is done by a Contractor, using Contractor-owned or rental equipment. Labor costs are based upon local costs, plus all benefits and Contractor profit. While the Company normally has a salvage operator come to the property and pick up scrap steel, the costs assume that the Contractor hauls the scrap steel to the Marysvale land-fill (the deposition of which is free of charge). The village of Marysvale then has salvagers pick up the scrap steel for which the village is paid on a scrap metal basis.

Submitted by,

A handwritten signature in cursive script, appearing to read "Wayne M. Ash".

Wayne M. Ash, P. Eng
Ash & Associates Consulting Ltd.

TABLE 1

DEER TRAIL MINING COMPANY, LLC RECLAMATION COST ESTIMATE: FINE ORE BIN

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LABOR

EQUIPT

TOT COST

The conveyor gallery between the mill and fine ore bin will be demolished and removed first. then the mill, and finally, the fine ore bin.

The work is assumed to be done by a contractor using the following guidelines. The contractor is assumed to be from Richfield, UT (approximately 30 miles away). Travel time each way is assumed at 40 minutes, for a total of 1.33 hrs per man per shift. Lunch is assumed at 30 minutes, coffee breaks (2 @ 15 min/shift) and normal work hour is 50 minutes. Thus, a normal shift

$$= (8 - 1.33 - 0.5 - 0.25 - 0.25) \times 50 / 60 = 4.72 \text{ hrs/shift}$$

Average labor rate in Richfield area is approximately \$13 per hour

Assumption is made that the Contractor's operators' basic wage of \$16/hr.

Workmens' Compensation, holiday pay, insurance, assume 50%

Profit to Contractor: assume 30%.

Cost per man per effective operating hour = $16 \times 1.50 \times 1.30 \times 8 / 4.72 = \$53/\text{hr}$, based on an 8 hour shift equivalent

EQUIPMENT:

Notes: Hourly costs for excavator, and Lo-boy semi-trailer truck include op labor, fuel & lube, rental, maintenance, contractor profit.

The excavator is brought in from SLC on a Lo-boy. The Lo-boy is also used for hauling the scrap steel to the dump. However, it should be noted that the fork-lift, excavator and Lo-boy are assumed to have been brought in for dismantling of the mill and other already-bonded facilities. Therefore the mobilization and demob have already been taken into account in the original bonding.

Equipment Sources and costs:

A high-lift fork lift rental (1 week)(from Nations' Rental, Salt Lake City)

Caterpillar 317 B L Excavator cost per operating cost per hour

Semi-trailer (Lo-boy) truck

250cfm compressor mob & demob from Richfield by Contractor

250 cfm compressor 1 week rental

Plugger for drilling concrete by Contractor. Cost based on footage drilled @\$1.00/ft

Footage cost includes drill rental, steel & bit wear, lubrication, drill maintenance.

\$165 per hr
\$100 per hr

\$700

\$700

\$165

\$100

\$150

\$150

\$500

\$500

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CONVEYOR GALLERY BETWEEN F.O.B. AND MILL

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LABOR

EQUIPT

TOT COST

Note: Conveyor gallery is removed before the mill or fine ore bins are dismantled

South wall: 13 ft long x 8 ft high

104

north wall 13' x 8'

104

west wall: 10' x 9'

90

roof: 22' x 13'

286

Total area

584 sq ft

Labor for removal of steel siding from roof section: 2 men, 1.5 hours @ \$53/mhr

\$159

\$159

Labor for dumping the siding into the pit: 2 men, 2 men, 1 hr @ \$53/mhr

\$106

\$106

Labor for removal of roof rafters: 2 men, 1 hour @ \$53/mhr

\$106

\$106

Labor for removal of steel siding from the walls, stacked: 2 men, 1.5 hrs @ \$53/mhr

\$159

\$159

Walls removal: the walls are pulled down, cut in manageable-sized pieces

using the chain saw, stacked next to the pit, and burned. The residue is pushed into the pit with the excavator.

Labor for cutting, removal, stacking wall and rafter wood for burning: 2 men, 1 hr @ \$53/mhr

\$106

\$106

FINE ORE BIN

WALL AND ROOF SQUARE FOOTAGES

The roof ridge-pole runs east/west and the slope is 2 ft vert per 6 ft hor.

North Wall (17.5+8) x 24.5

625 sq ft

South wall (17.5 +8) x 24.5

625 sq ft

East Wall (17.5 +5 +9) x 12

378 sq ft

West Wall (17.5+9) x 12

318 sq ft

Roof (13 x 25) (incl overhang)

325 sq ft

TOTAL AREA

2271 sq ft

Removal of steel siding from roof and walls, and 2" x 6" purlins: 2 men x 16 hrs @ \$53/mhr

\$1,280

\$1,280

Remove Upper Deck of Ore Bins: 2 men, 8 hrs @ \$53/mhr

\$848

\$848

REMOVAL OF TWO SILO BINS

The concrete structure is capped with 1/2" steel sleepers, to distribute the weight of bins over a larger area. The bins are tack-welded to the sleepers (steel pads).

Also connected to the sleepers are the bottom (discharge) hoppers.

The tops of the discharge hoppers, where secured to the sleepers, measure 10 ft by 8 ft.

The steel of the hoppers is 5/16" thick.

After removal of upper deck, the bins are separated from the discharge hoppers by cutting the tack-welds securing the bins to the sleepers. Then, the discharge hopper are separated from the sleepers.

Cost of separating bins and hoppers from sleepers:

Cut spot-welds Welds: 2 tanks at 18" per tank, 3/8" steel @ 5 min/ft	15 min
Cut Welds: 2 tanks x (10+8) x 2 @ 5/16" thick @ 4 min/ft	288 min
Cutting sleepers: 8 sleepers @ 2 ft @ 1/2" thick @ 7 min/ft	112 min
Total cutting time (min)	415 min
Total cutting time (mhr)	6.92 hr
Assume 8 hrs.	

Labor: 8 hrs @ \$68.25/mhr
Torch Rental: 2 days @ \$19.80/day
Gasses: 1 day @ 71.30/day

After removal of upper deck, and separation of the bins from the sleepers, the bins are pulled down with the excavator using a 100 ft wire rope. Then the discharge hoppers are separated from the sleepers and allowed to fall between the concrete walls and the sleepers are cut and removed.

Weight of each silo compared to lifting capacity of excavator

Diameter (incl part of channel stiffeners = 11.1 ft = 133.2 inches
 $P_1 = 3.14159$
Outside circumference of tank = $133.2 \times 3.14159 = 418.5$ inches
Height of each silo: 17.5 ft = 210 inches
Thickness of steel wall = 0.375 inches
density of steel: 0.285 lbs/cu inch
Weight of each silo = $418.5 \times 210 \times 0.375 \times 0.285 = 9,400$ lb = 4.7 tons
Lifting capacity of Cat 317 B L excavator at 20 ft above ground level = > 10,000 lb
Therefore, the excavator can lift and load each tank onto a semi-trailer truck without any cutting of the silo having to be done prior to loading.
Labor required to secure cable to top of each silo: 2 men 0.5 hours @ \$53/mhr

\$546	\$40	\$546
	\$72	\$40
		\$72

\$53		\$53
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LOAD, HAUL, DUMP WITH CONTRACTOR-OWNED FLAT-BED DUMP TRUCK:

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LABOR

EQUIPT

TOT COST

Cost per hour for contractor excavator & Operator

\$165.00 per hour

Loads required for steel, wood, steel siding:

2 loads

Loading time per load

2 hrs

Distance to Marysville land fill

8 miles

One-way time to Marysville Landfill Site

30 min

Dump Time:

2 hrs

Total load, haul, dump, return time= 2 x (2 + 0.5 + 2)

9 hrs

Total truck time =

9.00 hrs

Total Excavator time based on silos only

2.00 hrs

Cost per hour for truck (excluding driver)

\$75 per hr

Cost per hr for excavator operator/truck driver

\$60 per hr

Helper cost per hr

\$53 per hr

Labor cost for truck/excavator operator sans equipt: 5 hr @ \$75

\$875

Labor cost for helper: 9 hr @ \$60

\$540

Truck cost: 9 hr @ \$75

\$675

\$675

Excavator cost c/w operator: 4 hrs @ \$165/hr

\$660

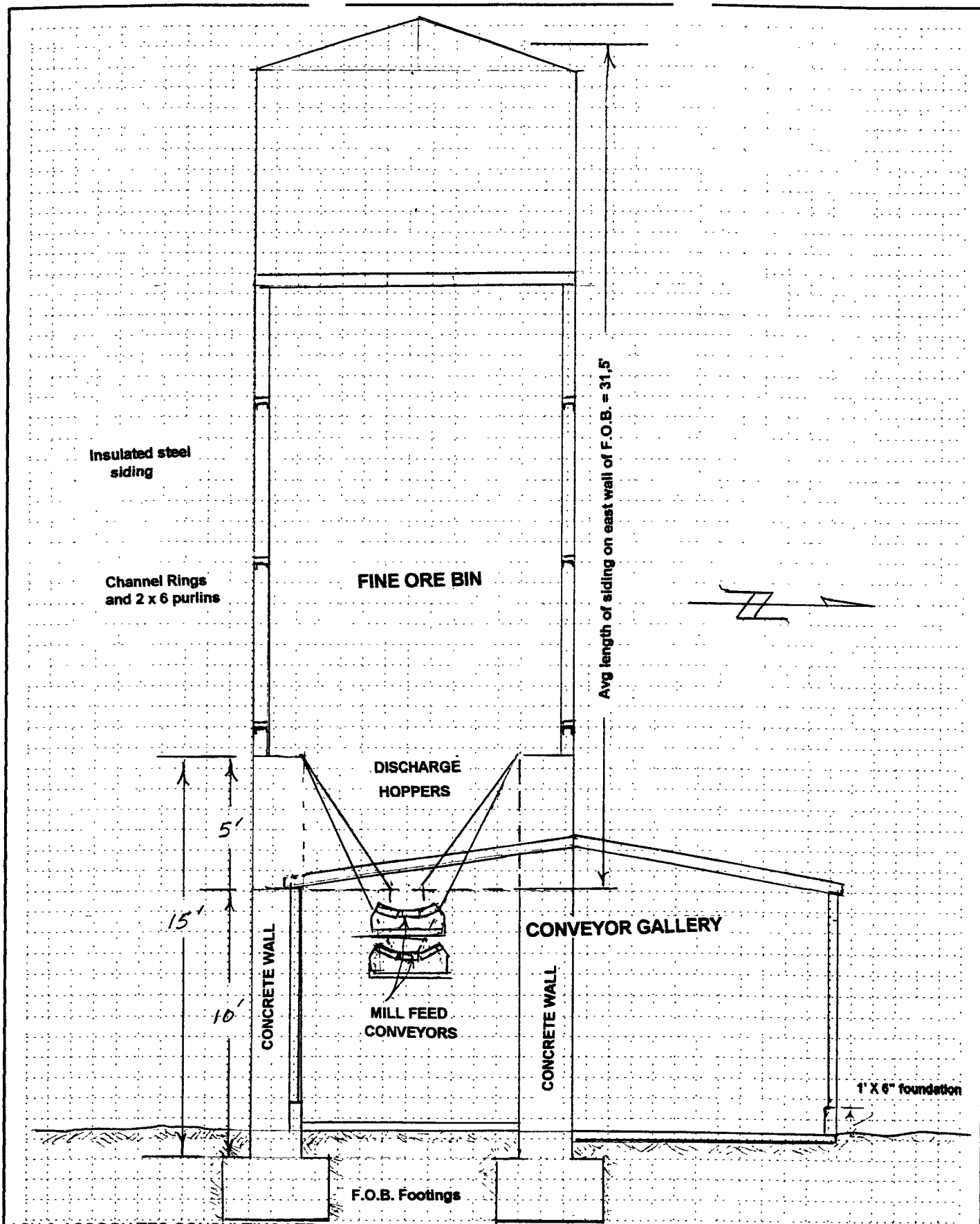
\$660

BLASTING OF CONCRETE TO BELOW GROUND LEVEL

Due to the ready-availability of two to 8 foot standard drill steel in good used condition, standard 7/8" drill steel and knock-off 1 3/8" bits are assumed for drilling the walls of the F. O. B.

A safety platform, composed of the used 2 x 6 purlins, is installed over the concrete walls. Then, 1 3/8" diam vertical holes are drilled down to a depth of 8 ft, at 2-ft intervals from the top, using a jackhammer drill. The area below the bottom of these holes (which is 6 ft high) is drilled 1-ft deep with a jackleg drill and starter (2-ft) steel at 1 - x 1' centers. The vertical holes are loaded with 1/2 stick of 1" x 8" NG explosives at 1 ft intervals, with a dry sand used as stemming, and tamped at 18" intervals. The horizontal holes are loaded with 1/2 stick per hole. All explosives are primed with B-Line, connected and blasted concurrently with a blasting cap.

		LABOR	EQUIPT	TOT COST
Volume of concrete Rubble:				
Main concrete in silo structure: $((24.5 \times 15' \times 2') \times 2) + (8 \times 15 \times 2)$	1,710 cu ft			
concrete floor of silos: $(8 \times 24.5 \times 0.333)$	65 cu ft			
concrete from 1 ft high foundation around gallery = $36' \times 1' \times 6" =$	18 cu ft			
concrete from gallery floor, foundations $(10 \times 10.5 \times 0.5) + (30 \times 0.5)$	68 cu ft			
Total cu yds in place = $1710 + 65 + 53 =$	1,861 cu ft			
Assume expansion factor of 50% = $1.50 \times 1846 =$	2,791 cu ft			
Assume doubling for other debris plus cover = 2.0×2769	5,582 cu ft			
Total cu yds to remove = $55537 / 27 =$	207 cu yds			
Excavator time to dig pits in convenient locations: $205 \times 19 / 60 =$	65 minutes			
Time used for estimate	1.5 hrs			
Time to fill excavations with rubble:	1 hr			
Time required to cover, smooth surface, assume 2 hrs	2 hrs			
Total cost to excavate,, fill hole, cover, smooth surface = 4.5×165			\$743	\$743
Cost for cutting Rebar:				
assume all horizontal rebars (0.50" diam) are cut at 3 ft vertical intervals:				
Number of slices $(24 + 24 + 8) / 3 =$	17.3 slices			
Rebar interval: 14 rebars on each side of wall + 4 verts on the bottom				
Total rebars to cut = $17.3 \times 32 =$	554 rebar cuts			
Rebars can be cut either with acetylene or with a hand grinder.				
It is assumed they are cut with gases at 30 seconds each.				
Total time = $554 \times 0.5 = 277$ min = 4.6 hrs. @ 68.25/mhr		\$315		\$315
Acetylene & Oxygen = 4.61 hrs @ \$71.30 sh = $3.5 / 8 \times 71.30 =$			\$41	\$41
Torch rental			\$18	\$18
GRAND TOTAL COST FOR RECLAIMING FINE ORE BIN				\$12,903



ASH & ASSOCIATES CONSULTING LTD.

VANCOUVER, B.C. Ph: (604) 809-5211 E-Mail: wash@direct.ca

CLIENT: **DEER TRAIL MINING CO.** PROJ: **DEER TRAIL MINE**

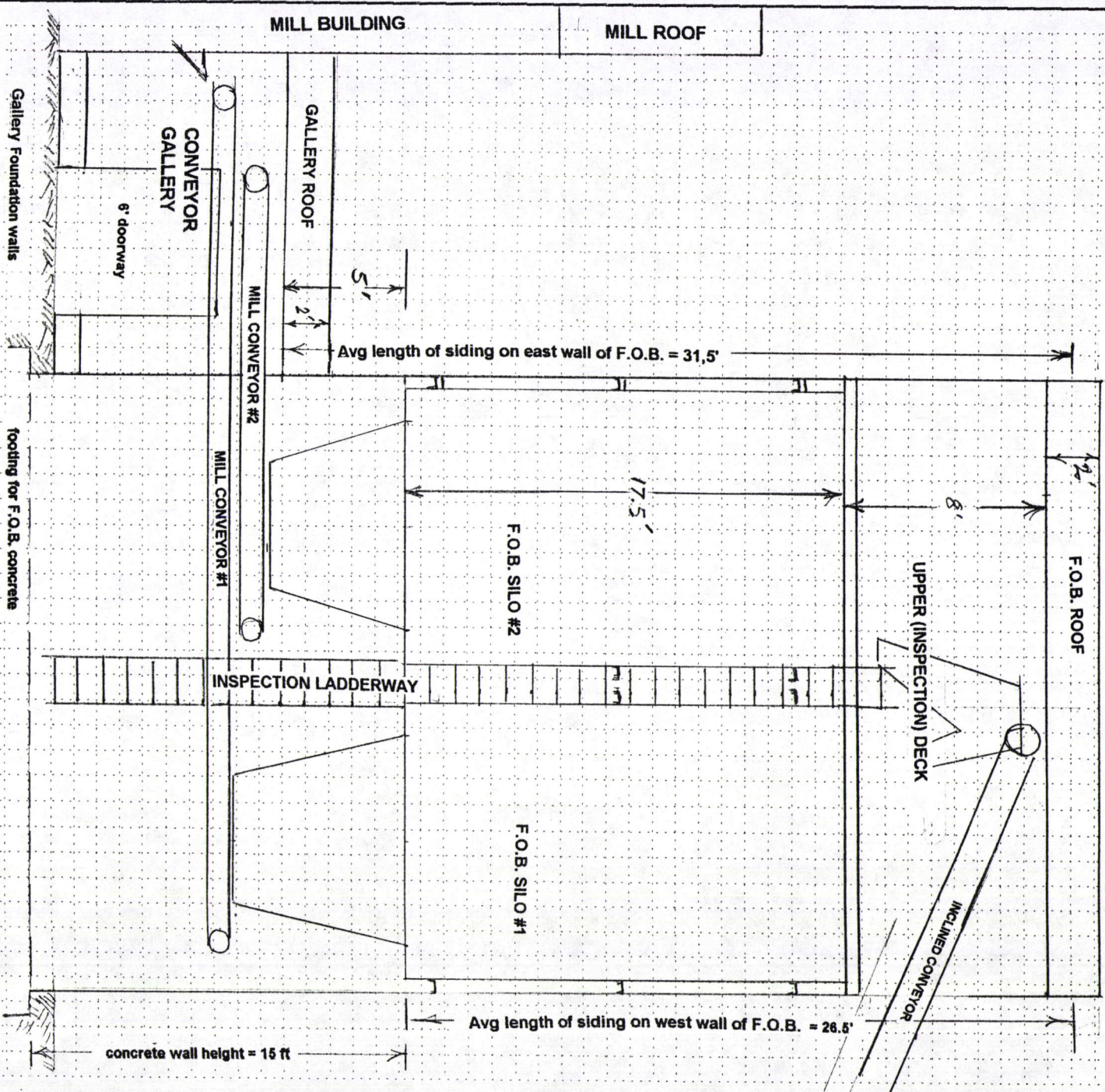
SCALE: 1 INCH = 5 FT

View of Fine Ore Bin & Conveyor Gallery

DATE: Apr 12, 2005

Looking West at Section A-A'

DR wa FIG. ML-12



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CLIENT:

DEER TRAIL MINING CO.

PROJ:

DEER TRAIL MINE

SCALE:

1 INCH = 6 FT

View of Fine Ore Bin & Conveyor Gallery

DATE: Apr 12, 2005

Looking South

DR wa FIG. ML-13